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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/586,204

09/29/2006

Wei-Ping Chen

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07/22/2010

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EXAMINER

KOSACK, JOSEPH R

ART UNIT

PAPER NUMBER

1626

NOTIFICATION DATE

DELIVERY MODE

07/22/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/586,204	<b>Applicant(s)</b> CHEN ET AL.	
	<b>Examiner</b> Joseph R. Kosack	<b>Art Unit</b> 1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 38-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 38-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Claims 38-44 are pending in the instant application.

#### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submissions filed on June 2, 2010 and June 7, 2010 have been entered.

#### ***Previous Claim Rejections - 35 USC § 103***

Claims 38-44 were previously rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi et al. (*Bull. Chem. Soc. Jpn.* 1980, 1138-1151) in view of Nettekoven et al. (*J. Org. Chem.*, 2001, 759-770) and Berlin et al. (*Proc. of the Okla. Acad. of Sci.*, 1965, 78-83).

The Applicant has traversed the rejection on the grounds that the Examiner did not respond to the Applicant's argument that primarily one P-diastereomer is preferably formed by the instant process.

The point that the Applicant raises is immaterial for the simple reason in that this feature is not claimed by the instant claims. The instant claims are drawn to making a chiral ligand, but does not state any particular location for the chirality to occur in the molecule. As can be clearly shown in the rejection, the compounds of Hayashi et al. have a chiral center in the chiral directing group.

Additionally, the claim is written in open claim language. If the claims were interpreted to mean that the product must not be in racemic form at the end of the process, the person of ordinary skill in the art would be motivated by the chiral catalysts of Nettekoven et al. to attempt to resolve any racemic mixtures to obtain a chiral catalyst such as those taught by Nettekoven et al.

Therefore, the arguments of the Applicant have been considered, but were not found to be persuasive. The rejection is maintained.

### ***Previous Double Patenting Rejections***

Claims 38-44 were previously provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 13-18 of copending Application No. 10/586,287.

The Applicant had previously asked that the rejection be held in abeyance, but the Examiner cannot do this as the policy of the US Patent and Trademark Office is to apply all applicable rejections as early as possible to facilitate compact prosecution. The rejection is maintained.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

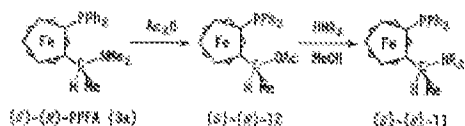
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 38-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi et al. (*Bull. Chem. Soc. Jpn.* 1980, 1138-1151) in view of Nettekoven et al. (*J. Org. Chem.*, 2001, 759-770) and Berlin et al. (*Proc. of the Okla. Acad. of Sci.*, 1965, 78-83).

$$\text{Fe}(\text{C}_5\text{H}_5)_2(\text{H})(\text{NH}_2) \xrightarrow[2. \text{CIPh}_2]{1. \text{BuLi}/\text{Et}_2\text{O}} \text{Fe}(\text{C}_5\text{H}_5)_2(\text{H})(\text{NH}_2)(\text{CIPh}_2)$$
$$\begin{aligned} R &= \text{Fe}, (R)-(S)\text{-PPFA (3a)} \\ R &= \text{K}, (R)-(S)\text{-PPFA (3b)}, \text{ which is an} \end{aligned}$$

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asymmetric transition metal complex catalyst. See Scheme 2, page 1139. This reaction has the same X\* and A groups as the instantly elected species where the A group is lithiated ortho to the X\* group, followed by conversion to include the phosphine group. Hayashi et al. teach the R groups on the phosphorus atom to be the same. Hayashi et al. also teach that the X\* group can be converted to another group, such as



. See Scheme 8, page 1140.

Hayashi et al. do not teach where the R1 and R1" groups are different or the extra step of reacting the ortho-lithiated substrate with a phosphine only containing R1 followed by adding a Grignard reagent in order to introduce R1" to the compound.



Nettekoven et al. teaches ferrocene catalysts , where the R groups on the phosphorus are different. See page 760, compounds 1a-1f.

Berlin et al. teach the reaction of a halogenated phosphine with a Grignard reagent in order to produce a phosphine with different R groups on it. See page 78.

Therefore, one of ordinary skill in the art would take the general method of Hayashi et al., with the knowledge that ferrocene catalysts with phosphines attached with different R groups are known as taught by Nettekoven et al., and that phosphines with different R groups can be made using a Grignard reagent as taught by Berlin et al., would be motivated to make the instant invention with a reasonable expectation of success.

### ***Double Patenting***

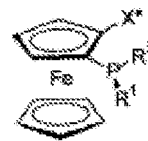
The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 38-44 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over at least claims 44 and 54-60 of copending Application No. 10/586,287. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are drawn to the same art specific subject matter.

‘287 teaches a method of ortholithiating a ferrocene that could have a 1-(1-dimethylamino)ethyl group attached to one of the ferrocene rings, reacting with R1PCl2 to create an intermediate, and then further reacting with an organometal reagent (which



would include Grignard reagents) to form the compound . Therefore, '287 teaches the instant claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### **Conclusion**

Claims 38-44 are rejected.

All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph R. Kosack whose telephone number is (571)272-5575. The examiner can normally be reached on M-Th 6:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on (571)-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Joseph R Kosack/  
Primary Examiner, Art Unit 1626